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Publication Date

2021

Peer reviewed|Thesis/dissertation

An Agency of Ideas: How Jerry Brown and the Office of Appropriate Technology Promoted
Alternative Energy in California

By

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THESIS

Submitted in partial satisfaction of the requirements for the degree of

MASTER OF ARTS

in

History

in the

OFFICE OF GRADUATE STUDIES

of the

UNIVERSITY OF CALIFORNIA

DAVIS

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2021

Abstract

In the 1970s, California Governor Jerry Brown imposed new limits on California, arguing that future losses of revenue and natural resources could alter state government's capacity to provide services. Embracing conservative ideas like reducing the size of government, limiting social program spending, and balancing budgets, Brown deviated from liberals within the Democratic Party. Although he was reluctant to create new programs, he wanted to promote resource conservation and offer Californians information on how to increase the state's environmental sustainability.

This paper examines the rise and fall of the Office of Appropriate Technology (OAT), an agency within the Brown administration that exemplified his interest in technological innovation and alternative energy sources. While scholars have studied the implementation of conservative principles in state and national government, I argue that Brown offered an alternative approach to governance that blended liberal and conservative ideas. OAT demonstrated the capacity of state government to promote ideas and provide funding for alternative energy projects, while also encouraging local governments and individuals to start projects in their own communities. Using a combination of newspapers, executive branch reports and publications, and legislative documents, this paper traces the development of OAT and shows how it started as an idea-generating machine for the governor and expanded to oversee projects that demonstrated potential for future investment, yet ultimately failed to entrench itself in state government after Brown left office. Although the office closed, its existence illustrated one Democratic response to rising conservatism in the state of California.

In a converted Mexican restaurant in May 1976, a few staffers for California Governor Edmund G. Brown Jr. discussed alternative energy projects and an uncommon idea called appropriate technology. What started as a small coterie of dedicated believers, transformed into a new technological innovation agency for the state, which expanded over a few years from an initial budget of \$300,000 to millions of dollars by the 1980s. A relatively understudied part of Governor Jerry Brown's administration, the Office of Appropriate Technology,¹ commonly called OAT, represented a new approach to technological innovation, one that fit an anti-government mood and yet depended on governmental leadership. OAT generated publications, offered project grants, and advised government officials across the executive branch. In addition, offered guidance to local governments and community organizations trying to innovate in resource management. Thus, OAT tried to promote strategic investment in resource management and conservation, encourage self-sufficiency in communities, and advocate for collaboration with agencies and municipalities rather than using government regulation.

This paper argues that Brown's Office of Appropriate Technology represented one way that Democrats responded to voters' burgeoning conservatism in the 1970s and early 1980s. Although historians have shown how conservatives installed conservative principles into national and state governments, there is less research on how Democratic leaders attempted to redefine liberalism and adapt to rising conservatism in the United States.² Like President Jimmy Carter,

¹ Gary Hamilton and Nicole Woolsey Biggart, *Governor Reagan, Governor Brown: A Sociology of Executive Power* (New York, NY: Columbia University Press, 1984), 208; Alan L. Menadue, "Era of Limits; Edmund G. Brown, Jr.s' Approach to Policy Decisions During His Governorship 1975-1982" (Dissertation, Los Angeles, CA, University of Southern California, 1991), 432; Miriam Pawel, *The Browns of California: The Family Dynasty That Transformed a State and Shaped a Nation* (New York, NY: Bloomsbury Publishing, 2018), 255-256; Jim Newton, *Man of Tomorrow: The Relentless Life of Jerry Brown* (New York, NY: Little, Brown and Company, 2020), 137-138.

² Lily Geismer, *Don't Blame Us: Suburban Liberals and the Transformation of the Democratic Party* (Princeton, NJ: Princeton University Press, 2015), 10; Patrick K. Andelic, *Donkey Work: Congressional Democrats in Conservative America, 1974-1994* (Lawrence, KS: University Press of Kansas, 2019), xviii.

Governor Jerry Brown imposed limits on his constituency and argued that government could not sufficiently resolve social issues. While Brown accepted conservative principles like his predecessor, such as a need for balanced budgets and reduced regulation, he differed in his desire to use government to promote energy and resource conservation. Rather than promoting public works and state services or significantly reducing programs, Governor Brown's used his platform as governor to disseminate ideas, trying to promote policy innovation. Essentially, Brown stimulated conversation on alternative technologies and attempted to translate these ideas, to varying degrees, into policy. Even though OAT created some concrete projects, many of the ideas animating the office did not move past rhetoric. However, these ideas reveal the challenge in formulating a new program designed for policy intervention, but that fundamentally questioned government's capacity to solve societal problems. This paper argues that the Office of Appropriate Technology started as an ideas machine for the governor and expanded to generate projects that demonstrated potential for future investment, yet ultimately failed to entrench itself in government after Brown left office.

California's Partisan History, 1900-1974

For the first half of the twentieth century, California politics lacked strong partisan organization. In the early 1900s, progressive reformers like Hiram Johnson sought to weaken the control of "interests," like the Southern Pacific Railroad, and "return the government to the people."³ These reform efforts reshaped state politics, especially with the introduction of a cross-filing system, which allowed political candidates to register in party primaries other than their own. Although reformers argued that cross-filing would produce qualified candidates, it actually

³ Spencer Olin Jr., *California's Prodigal Sons: Hiram Johnson and the Progressives, 1911-1917* (Berkeley, CA: University of California Press, 1968), 34, 35.

reinforced Republican Party dominance in the state. However, party dominance did not mean that individual representatives necessarily agreed on the proper role of the state in society. Unlike other states, California politicians did not depend on state party operatives to help them win local and state elections.⁴ Thus, politicians acted, in the words of one historian, as a “party of one” dependent more on their own autonomy and influence within their constituency.⁵ In practice, this meant that many Republicans moderated their positions to remain viable candidates in both party primaries. However, in the 1950s, ambitious politicians in both parties strategized to break this political situation. Republicans like then-Vice President Richard Nixon and Senator William Knowland rejected Governor Earl Warren’s bipartisan governorship and pushed for a more ideological Republican Party.⁶ Similarly, Democratic Party activists organized at the local level, which energized potential voters and mobilized their support for Democratic candidates.⁷ Despite a history of weak political parties, ambitious party leaders and grassroots activists envisioned a new path for California politics by midcentury.

The election of Pat Brown as governor in 1958 marked a turning point for the Democrats and seemed to confirm a new future for the party. Before the campaign, Brown was the only statewide Democratic officeholder, serving as Attorney General. Thus, Democrats rallied around him as their best chance to win the governorship. In contrast, the Republicans split, replacing

⁴ Carey McWilliams, *California: The Great Exception* (Berkeley, CA: University of California Press, 1949), 194-197; Olin Jr., *California’s Prodigal Sons*, 44; Jonathan Bell, *California Crucible: The Forging of Modern American Liberalism* (Philadelphia, PA: University of Pennsylvania Press, 2012), 13, 22.

⁵ McWilliams, *California*, 193-194; Kevin Starr, *Golden Dreams: California in an Age of Abundance, 1950-1963* (New York, NY: Oxford University Press, 2011), 193

⁶ Starr, *Golden Dreams*, 202, 206.

⁷ Bell, *California Crucible*, 88, 99. For more on Democratic Party organizing during this period, see James Richardson, *Willie Brown: A Biography* (Berkeley, CA: University of California Press, 1996), 55-60; James Mills, *A Disorderly House: The Brown-Unruh Years in Sacramento* (Berkeley, CA: Heyday Books, 1987), 5-12.

centrist incumbent Goodwin Knight with Senator Knowland, a staunch conservative. Rather than running as an ideologue, Pat Brown argued that he would lead the state with a “responsible liberalism.”⁸ Californians elected Brown by a million-vote margin and he became the second Democratic governor in the twentieth century. Although initially cautious, the new governor believed the state’s demographic changes merited state leadership in higher education, public works, and race relations. After defeating Richard Nixon for re-election, Pat Brown grew increasingly confident that Californians appreciated his liberal program and that voters saw conservatives as obstacles to progress rather than viable political contenders. His overconfidence led him to move into more ambitious programs, like securing the passage of the Rumford Fair Housing Act.⁹ As soon as it passed, opponents of the Act sought to repeal it through the Proposition 14 campaign. Supporters of the repeal argued that Brown overstepped and threatened Californians’ “Freedom of Choice.”¹⁰ Prop 14 passed overwhelmingly and represented a turning point for Pat Brown-style liberals.¹¹ After the 1964 repeal campaign, liberals had to defend their approach and contend with rising conservatism throughout the state.

Ronald Reagan’s election as governor in 1966 confirmed a new political order for California and effectively produced Democratic disarray. Despite his waning popularity, Pat Brown chose to run for reelection to a third term. In contrast to Governor Brown, Speaker Jesse Unruh, who wanted to run for governor, argued that the Party’s emphasis on minorities

⁸ Matthew Dallek, *The Right Moment: Ronald Reagan's First Victory and the Decisive Turning Point in American Politics* (New York, NY: Oxford University Press, 2004), 14.

⁹ Dallek, *The Right Moment*, 17-18, 42-43, 50-51.

¹⁰ Dallek, *The Right Moment*, 60.

¹¹ Dallek, *The Right Moment*, 60-61. To be sure, race and racial discord were key elements of the Proposition 14 campaign, for more information on this see Mark Brilliant, *The Color of America Has Changed: How Racial Diversity Shaped Civil Rights Reform in California, 1941-1978* (New York, NY: Oxford University Press, 2012), 190-226; Daniel HoSang, *Racial Propositions: Ballot Initiatives and the Making of Postwar California* (Berkeley, CA: University of California Press, 2010), 67-90.

“alienated the majority,” and that the next governor needed to construct a new majority to effectively govern.¹² Similarly, Los Angeles Mayor Sam Yorty challenged Brown, but moved further right, advocating a law-and-order approach to social problems.¹³ Brown won the Democratic primary but entered the general election significantly weakened. In contrast, Reagan won the Republican primary by a significant margin, swaying moderates in the Party to join him. Throughout the campaign, Brown tried to label Reagan an inexperienced candidate and a political extremist. However, the charges failed to stick because Reagan successfully distanced himself from the far-right John Birch Society and managed to convince voters that, unlike Goldwater, he was electable.¹⁴ Reagan went on to win the general election, stressing “individualism, free enterprise, and a limited and businesslike government.”¹⁵ In practice, he took a managerial approach to government, encouraging consensus among his cabinet and delegating responsibilities across the executive branch. Ironically, Reagan’s approach systematized government and strengthened much of the bureaucratic structure inherited from Governor Pat Brown.¹⁶ Thus, rather than truly shrinking government or destroying liberal programs, Reagan rhetorically legitimized distrust of government in California, which persisted well beyond his governorship.¹⁷

¹² Lou Cannon, *Ronnie and Jesse: A Political Odyssey* (Garden City, NY: Doubleday, 1969), 314; Bill Boyarsky, *Big Daddy Jesse Unruh and the Art of Power Politics* (Berkeley, CA: University of California Press, 2008), 130-131, 145.

¹³ Dallek, *The Right Moment*, 163.

¹⁴ Lou Cannon, *Governor Reagan: His Rise to Power* (New York, NY: Public Affairs, 2003), 148; Kurt Schuparra, *Triumph of the Right: The Rise of the California Conservative Movement, 1945-1966* (Armonk, NY: M.E. Sharpe, 1998), 148, 150.

¹⁵ Hamilton and Woolsey Biggart, *Governor Reagan, Governor Brown*, 184.

¹⁶ Hamilton and Woolsey Biggart, *Governor Reagan, Governor Brown*, 186, 196, 200.

¹⁷ Cannon, *Governor Reagan*, 386; This distrust did not mean that Californians did not like the services government provided, they just became more reluctant to support government expansion, especially if they could afford it from private sources, Mathews and Paul, *California Crackup: How Reform Broke the Golden State and How We Can Fix It* (Berkeley, CA: University of California Press, 2010), 45.

Brown and the Symbolism of Limits

Jerry Brown's political strategy successfully fit the mood of California politics in the 1970s. Most importantly, Californians started to embrace an anti-political attitude.¹⁸ In the wake of the Watergate scandal, voters wanted political leaders who seemed trustworthy and disconnected themselves from common sources of political power. Yet, despite being the son of a former governor and an incumbent government official, Brown managed to pitch himself as a political outsider. As California Secretary of State, he advocated campaign finance reform and argued that he was not beholden to special interests, even those of his fellow Democrats.¹⁹ Another aspect of his outsider message was that he would initiate a "new spirit" for California government and ensure that the state would "be used for the benefit of the many rather than the privileged few."²⁰ Similarly, critiquing the Reagan years, Brown insisted that it was "time for an activist Democratic governor."²¹ This strategy helped Brown beat other seasoned Democratic hopefuls in 1974, including an Assembly Speaker, to become the party's nominee for governor. Although he would still need to differentiate himself from the Republican candidate, Brown took advantage of shifting attitudes in the state to secure the Democratic Party nomination.

During the general election campaign, Brown carefully cultivated an image without concrete policy positions and Californians remained uncertain about what he might do if elected. His decision to run in 1974 was both strategic and symbolic. Hoping to capitalize on the post-Watergate mood and the weakness of the Republican Party, Brown ran an inoffensive campaign

¹⁸ Bell, *California Crucible*, 269.

¹⁹ Pawel, *The Browns of California*, 197.

²⁰ Ed Salzman, *Jerry Brown: High Priest and Low Politician* (Sacramento, CA: California Journal Press, 1976), 35.

²¹ Salzman, *Jerry Brown*, 17.

to avoid alienating potential voters.²² This meant that he identified education, environment, economic growth, and political reform as his four main policy priorities.²³ In each of these policy areas, he intended to use state government but was unclear about what he would do. In contrast, his opponent Republican Houston Flournoy, a former professor of government, liked to give complex answers to explain his conservatism and how he would govern.²⁴ He convinced Flournoy to agree neither campaign spend more than \$900,000.²⁵ Brown did this so that he could convince voters that he did not want money corrupting politics, but he also knew that it would restrict Flournoy's ability to increase his name recognition. Thus, Brown benefitted politically and symbolically. However, in the end, Brown narrowly won the 1974 gubernatorial campaign.²⁶ He could no longer survive on a vague platform of ideas and name recognition; now, he needed to govern.

Differentiating himself from his father would not be hard. Unlike Pat, Jerry Brown blended elements of conservatism and liberalism. Brown broadly supported liberal positions, including affirming rights for people of color and women and supporting collective bargaining for public employees.²⁷ However, he was skeptical about whether government could solve social problems, arguing for the need for more efficiency. Like Reagan, he based his campaign strategy on popular rhetorical themes that attacked the Pat Brown legacy without specifying what he meant.²⁸ Less than substance, he wanted to challenge the idea of governmental operation. He

²² Steve Swatt, *Game Changers: Twelve Elections That Transformed California* (Berkeley, CA: Heyday, 2015), 183.

²³ Pawel, *The Browns of California*, 200.

²⁴ Salzman, *Jerry Brown*, 30.

²⁵ John C Bollens and G. Robert Williams, *Jerry Brown: In a Plain Brown Wrapper* (Pacific Palisades, CA: Palisades Publishers, 1978), 98.

²⁶ Salzman, *Jerry Brown*, 33.

²⁷ Pawel, *The Browns of California*, 200.

²⁸ Pawel, *The Browns of California*, 200; Rarick, *California Rising*, 371-372.

exemplified this approach in his attitude toward his staff while in office. He regularly challenged their ideas and often pitted staff against each other to refine ideas.²⁹ Rather than serving as an administrator, he wanted to change peoples' ways of thinking. Symbolically, he refused to stay in the new Governor's Mansion and chose instead to rent a one-bedroom apartment with only a mattress on the floor. Similarly, he refused to ride around in a limousine and drove a Plymouth Navigator.³⁰ Brown's offered his personal choices as a demonstration of his belief that, like individuals, the state needed to reduce its consumption. He would not be the second rendition of Pat Brown, the last Democratic governor who presided over a period of massive infrastructure projects and the expansion of public programs and services.³¹ In a sense, he offered his personal asceticism as a justification for the kind of austerity politics that he would impose on California.

At his inauguration in 1975, Governor Jerry Brown did not give a long, policy-driven speech. Instead, he chose to address the legislature for only seven minutes, revealing his discomfort with ceremonies, which he felt distracted him from the work he thought a governor ought to do.³² He began somewhat informally, telling the state legislators that "I just want to tell you what's on my mind."³³ Rather than celebrating his victory and the restoration of Democratic power in the state, he chastened his audience by saying that the election represented a vote of no confidence in the government. Essentially, the governor argued that the lack of voter turnout meant that Californians were upset with the direction of the state and refused to participate. The governor reminded the legislature that they would try to avoid a tax increase, but to do so they would have to reduce spending across the board. Knowing the legislature would react negatively

²⁹ Hamilton and Woolsey Biggart, *Governor Reagan, Governor Brown*, 107-108, 200-202.

³⁰ Robert Pack, *Jerry Brown* (Washington, D.C.: Political Profiles, Inc., 1979), 97.

³¹ Kevin Starr, *California: A History* (New York, NY: The Modern Library, 2015), 243-244.

³² Hamilton and Woolsey Biggart, *Governor Reagan, Governor Brown*, 49.

³³ Edmund G. Brown Jr., "First Inaugural Address," January 6, 1975,

<https://governors.library.ca.gov/addresses/34-Jbrown01.html>.

to his proposal, Brown announced his decision to cut spending in the Governor's Office by seven percent.³⁴ He concluded his speech with an analysis of the problems facing the state and reminded his audience that "We have a lot of work to do. Let's get to it."³⁵ Ignoring the niceties most legislators expected from a leader of their own party, Brown did not want to build social bonds. More than anything, he signaled to the Legislature that he wanted them to follow his lead rejecting ceremonial roles that impeded what he felt were the proper roles of government.

Struggling to Translate Ideas into Action

Economist E.F. Schumacher's *Small is Beautiful: Economics as if People Mattered*, convinced Brown of the need for a new economic and technological approach to societal problems. Schumacher's main argument was that "the idea of unlimited economic growth" was significantly flawed because infinite resources were unavailable and that the environment could not handle the production that unlimited growth demanded.³⁶ This impacted Brown's thinking in two key ways. First, he took seriously Schumacher's interest in scales of organization. This principle correlated with many of Brown's public comments on reducing government expansion and operating more efficiently. Second, Brown was interested in Schumacher's idea of "intermediate technology," which the economist described as "self-help technology, or democratic or people's technology."³⁷ This concept gave rise to the larger appropriate technology movement, which Brown incorporated into his administration.³⁸ Brown's interest in

³⁴ Brown Jr., "First Inaugural Address."

³⁵ Brown Jr., "First Inaugural Address."

³⁶ E. F. Schumacher, *Small Is Beautiful: Economics as If People Mattered* (New York, NY: Harper & Row, 1973), 28.

³⁷ Schumacher, *Small is Beautiful*, 145.

³⁸ Carroll Pursell, "The Rise and Fall of the Appropriate Technology Movement in the United States, 1965-1985," *Technology and Culture* 34, no. 3 (1993): 631, <https://doi.org/10.2307/3106707>.

the book exceeded a passing interest. He insisted that each member of his staff get a copy and later invited the economist to give a lecturing tour in California.³⁹ Rather than shaping his style of governance in California, *Small is Beautiful* provided a broader worldview that shaped how Brown approached societal issues. The framework could be rigid, so converting ideas into a practical style of governance would have to come later.

Governor Brown attempted to implement Schumacher's ideas through the establishment of the Office of Appropriate Technology (OAT), which conformed to his idea of environmental limits. In May 1976, Brown signed Executive Order B-18-76, establishing the office. Without providing a rigid set of priorities, the governor emphasized his ideological motivations for action. The Executive Order began with an acknowledgment that "we live today in an era of limited resources."⁴⁰ He did not cite where these limits came from but advanced the idea as a self-evident challenge that the governor argued his administration needed to face head-on. To achieve this, he directed OAT to study technologies "which [were] less wasteful, less costly, less bureaucratic, and less harmful to people and the environment..."⁴¹ These guiding principles revealed Brown's desire to use government as a leader in the development of a sustainable future while implying that existing agencies were incapable of achieving these goals. Although OAT was a new government agency, Brown intended it to be distinct from the existing bureaucracy. In this way, he thought that the office could innovate without being beholden to existing agencies' priorities. Thus, he placed OAT in the larger Office of Planning and Research (OPR), which made it directly reportable to the Governor and outside of any cabinet departments.⁴² Effectively,

³⁹ Pack, *Jerry Brown*, 225, 229.

⁴⁰ Exec. Order. No. B-18-76 (May 12, 1976).

⁴¹ Exec. Order. No. B-18-76 (May 12, 1976).

⁴² Exec. Order. No. B-18-76 (May 12, 1976).

the Office of Appropriate Technology was Brown's practical attempt to approach his self-identified challenge of limited resources in California.

As the first director of OAT, Brown delegated authority to the State Architect, Sim van der Ryn, an idealistic proponent of appropriate technology. Van der Ryn was an unconventional bureaucrat, who served as a professor of architecture at Berkeley and left the University to become a co-founder of the Farallones Institute, a non-profit center dedicated to the application of appropriate technology.⁴³ Like Governor Brown, Van der Ryn believed in E.F. Schumacher's ideas and wanted to implement them throughout the state. Indeed, his report, "Appropriate Technology and State Government," served as the basis for Brown's creation of OAT. Fundamentally, Van der Ryn assumed postwar economic growth had given way to "new conditions of resource scarcity."⁴⁴ He insisted that these resource limits would only increase and argued that the state should encourage citizens to plan for a more environmentally conscious future. To promote sustainability, he suggested that a new agency should reduce "administrative and legal barriers to decentralization, social change, small-scale, self-reliant enterprise and low consumptive life-style projects."⁴⁵ Primarily, he wanted to "raise consciousness, both internally...and externally," with the hope of developing "a constituency."⁴⁶ However, his report remained rhetorical at the outset of OAT's operation, which forced staff to determine how to translate these broad ideas into practice.

⁴³ Joann Edin, "Van Der Ryn for Small-Is-Beautiful," *California Journal* 8, no. 1 (January 1977), 25; Pawel, *The Browns of California*, 255.

⁴⁴ Sim Van der Ryn, "Appropriate Technology and State Government" (Sacramento, CA: Office of Appropriate Technology, August 1975), 1.

⁴⁵ Van der Ryn, "Appropriate Technology and State Government," 6.

⁴⁶ Edin, "Van Der Ryn for Small-Is-Beautiful," 26.

Starting in a “converted former Mexican restaurant,” OAT focused its initial work on collecting information and developing a robust public relations effort.⁴⁷ In its first few months, the office created brochures that described key topics in the field of appropriate technology that included recommended readings, documentaries, and organizations for practitioners and interested readers. These packets were short, usually ranging from two to four pages, with narrow, focused topics. One brochure titled “costs of urban growth” encouraged readers to follow the lead of other communities that were “beginning to decide HOW they want to live and what kind of growth - if any - is good for that goal, and acting accordingly.”⁴⁸ Rather than technical documents, these OAT brochures made the argument that appropriate technology principles prioritized people and created a better quality of life more accessible. To augment this work, the Office solicited books and related materials from readers to form a library that state employees and the public could access to borrow texts they might apply in their work.⁴⁹ Essentially, OAT wanted to demonstrate that anyone could apply appropriate technology principles. For state employees, OAT hosted an ongoing seminar series where guest speakers taught new ideas in appropriate technology and identified ways to coordinate government actions.⁵⁰ OAT’s accumulation of information allowed it to publicize its guiding ideas, develop a base of stakeholders, and start forming a foundation for future funding from the legislature.

Before starting concrete projects, OAT established guiding principles of appropriate technology and how to assess it. The first few reports that OAT published provided several bibliographies, which encouraged readers to study E.F. Schumacher’s *Small is Beautiful* and

⁴⁷ “Brown’s ‘Small is Beautiful’ is taking root,” *San Bernardino Sun*, 30 April 1978.

⁴⁸ “Costs of Urban Growth” (Sacramento, CA: Office of Appropriate Technology, 1976).

⁴⁹ *Office of Appropriate Technology: Purpose, Organization, and Activities* (Sacramento, CA: Office of Appropriate Technology, 1976), 2. Located in D-601, Box 5, Folder 7, Fujimoto (Isao) Papers, University of California, Davis Archives and Special Collections, Davis, CA

⁵⁰ *Office of Appropriate Technology*, 3.

Ivan Illich's *Tools for Conviviality*, among others to understand the field.⁵¹ However, OAT staff recognized the need for a clear distillation and application of these texts for most state employees and potential stakeholders. Above all, the application of appropriate technology was intended to be "socially feasible" and enhance the quality of life for people rather than cause harm.⁵² To that end, OAT provided two reports on appropriate technology, that established assessment criteria and defined the term.⁵³ Both reports were esoteric and likely did not help lay readers. In practice, the more philosophical aspects influenced OAT staff's planning, but were conveyed to the public as the implementation of energy-saving technologies and a "special interest in helping people improve their quality of life through energy and resource self-reliance."⁵⁴ Because defining the term would not be what won over critics and skeptics, OAT staff needed to demonstrate that ideas could produce concrete outcomes for the state.

OAT's initial work prioritized small-scale conservation projects in the Capitol area. One of OAT's first projects was to purchase fifty bicycles for state employees so that they could quickly travel between offices and state facilities.⁵⁵ Echoing Governor Brown's choice to forgo a limousine, OAT staff encouraged state employees to reduce their use of state vehicles to save time, conserve energy, and reduce fuel costs. To promote the use of solar panels and provide job training, the office created a Solar Technician Training program that coordinated its work with the State Architect and Department of Real Estate Services.⁵⁶ This program educated potential

⁵¹ Van der Ryn, "Appropriate Technology and State Government," 2, 5; "Appropriate Technology" (Sacramento, CA: Office of Appropriate Technology, 1976), 1; Jerry Yudelson and Sim Van der Ryn, "What Is Appropriate Technology?" (Sacramento, CA: Office of Appropriate Technology, June 1976), 13.

⁵² Lynn Nelson and Jerry Yudelson, "Criteria for an Appropriate Technology" (Sacramento, CA: Office of Appropriate Technology, May 1976), i, 3.

⁵³ Nelson and Yudelson, "Criteria for an Appropriate Technology," 1-2.

⁵⁴ *Office of Appropriate Technology*, 2.

⁵⁵ Paul Goldberger, "Blueprint for a New Kind of Bureaucracy," *New York Times*, June 25, 1977.

⁵⁶ *Office of Appropriate Technology*, 4.

solar installers on the merits of solar energy and taught them technical skills, which they applied to state-owned properties.⁵⁷ As a result, OAT provided job training and education, while simultaneously previewing the potential for future energy cost savings. To promote water conservation, staff created a drought-tolerant garden to test new planting and watering techniques.⁵⁸ Like other programs, this garden intended to serve as a small-scale project intended to demonstrate potential benefits for different groups. In this case, the garden would provide “a data base for drought tolerant landscaping efforts in the Central Valley” and promote new ideas for home gardeners.⁵⁹ OAT conservation projects were small enough to require low initial costs and to suggest widespread possibilities.

Seeking alternative funds, OAT successfully secured grants to pilot projects that could grow with more state funding. Using \$34,000 from the Federal Energy Administration, OAT converted a trailer into a traveling “New Possibilities Exhibit.”⁶⁰ The trailer promoted “innovative ideas for conservation and self-reliance in the home.”⁶¹ Although this exhibit did not provide direct economic benefits, it represented a venue for Californians to connect with an office in Sacramento that they otherwise might not. Moreover, OAT staff estimated that these interactions created \$100,000 in indirect economic benefits annually.⁶² Another project, known as a “gassifier,” promoted the burning of organic waste as a natural gas substitute.⁶³ The project used organic waste, including walnut shells, woodchips, corncobs, and other wood-like substances. This source of alternative energy could re-purpose waste products that were cheap

⁵⁷ *Office of Appropriate Technology*, 4.

⁵⁸ Dennis J. Opatrny, “A Bureaucracy for the Future,” *San Francisco Examiner*, October 9, 1977.

⁵⁹ *Office of Appropriate Technology*, 5.

⁶⁰ Opatrny, “A Bureaucracy for the Future.”

⁶¹ *Office of Appropriate Technology*, 4.

⁶² *The Office of Appropriate Technology: An Analysis of the Cost-Effectiveness of its Programs*, 17.

⁶³ John Fialka, “Brown’s ‘Small Is Beautiful’ Is Taking Root,” *San Bernardino Sun*, April 30, 1978.

and decrease the state's dependence on natural gas. Indeed, the gassifier would later serve as the foundation for a proposal to heat several office buildings, which would save the state \$213,000 in energy costs in the 1980-1981 fiscal year.⁶⁴ The promise of alternative energy depended on the Office of Appropriate Technology staff's ability to review project proposals and provide funding for projects with widespread applications.

While OAT believed in its mission, some state officials and reporters were critical and skeptical. One critic in the Brown administration called OAT an "adhocracy" because they lacked a clear direction.⁶⁵ Because the concept was so new, OAT staff had to start somewhere, but the critique reflected that their primary contribution was a set of lofty ideas. Unlike executive agencies and departments created through legislation, OAT worked at the discretion of the governor and had to defend its claims or face defunding or potential termination. Apart from defining a mission, OAT also had to contend with criticisms that it was strange or eccentric, rather than a practical part of policymaking. An Assembly Resources Committee aide told a reporter "I'm not sure even now what these people do...they're not in the mainstream of broad state energy policy."⁶⁶ Similarly, a Capitol reporter mocked the New Possibilities Exhibit as "a modern snake-oil wagon rumbling from rural hamlet to big city ghetto to county fair."⁶⁷ These critiques reflected the need for OAT to demonstrate true economic benefits. Without significant applications of their work across various agencies and organizations, the office would not be able to be successful.

⁶⁴ *The Office of Appropriate Technology: An Analysis of the Cost-Effectiveness of its Programs*, 16, 22.

⁶⁵ John Fialka, "Small Is Growing," *The Missoulian*, April 30, 1978.

⁶⁶ Cheryl Clark, "Office of Appropriate Technology Seeks a New Image," *Sacramento Bee*, August 27, 1978.

⁶⁷ Dennis J. Opatrny, "A Bureaucracy for the Future," *San Francisco Examiner*, October 9, 1977.

OAT Establishes a Record

The Office of Appropriate Technology's commitment to thinking about the size and scale of projects guided its operation in its first full year. OAT's budget for the 1977-1978 fiscal year was almost \$332,000, composed mostly of state energy commission funds and a federal program intended for public works.⁶⁸ Essentially, the office needed to find money to ensure they could stay open, as well as to initiate new projects to promote future state funding. Recognizing the need for collaboration, then-Director Kirk Marckwald insisted that staff meet with people across the state, in their communities "rather than perpetuate the tunnel vision of Sacramento."⁶⁹ As a practical matter, OAT could make a more effective pitch for funding by illustrating the demand for their work. Though it remained unclear how self-reliance could extend across the state, OAT staff emphasized the need to share the expertise and information for implementing alternative technologies. Their next step focused on producing demonstration projects across the state.

Empowering organizations, OAT used its power to solicit and promote alternative energy projects. With money from the federal Appropriate Energy Technology Grants Program, the office started a contest to promote small-scale technology. The grants came at various scales, ranging from \$10,000 for idea development projects, up to \$200,000 for a ready-to-implement project.⁷⁰ Instead of restricting the range of potential projects, OAT encouraged the creativity of state residents and effectively provided seed money to individuals to develop their proposals. Furthermore, the office could use the projects to demonstrate how these projects could be used throughout the state to save money and give individuals the resources to repeat successful projects to conserve energy. For instance, Davis Alternative Technology received a grant to

⁶⁸ Gigi Coe, "California: Beyond the Bottom of the Barrel," *RAIN: Journal of Appropriate Technologies* 4, no. 2 (November 1977), 3.

⁶⁹ Coe, "California: Beyond the Bottom of the Barrel," 3.

⁷⁰ "Wanted: Bright Energy Ideas," *Sacramento Bee*, November 3, 1977.

study ways to save energy in low-income homes.⁷¹ They would use the findings to inform and train the Sacramento Housing Redevelopment Agency on best practices. Another group received a grant to treat sewage and capture methane for fuel that could be replicated by municipalities.⁷² In total, 58 Californians received the Department of Energy grants, providing the state economic benefits estimated at \$640,000.⁷³ OAT's financial support of alternative energy projects allowed it to produce demonstration projects that could be implemented at the state and local levels.

The Office of Appropriate Technology's focus on solar power as an alternative energy source benefitted Brown politically. Over the long term, the administration hoped that 20% of all homes and commercial buildings in California could implement solar heating by 1985.⁷⁴ This ambitious proposal served as Brown's basis for an alternative energy strategy.⁷⁵ In contrast, at the national level, President Jimmy Carter and Energy Secretary James Schlesinger promoted nuclear energy to alleviate concerns about keeping the lights on.⁷⁶ However, Carter faced criticism from Congressional Democrats for not forcefully promoting solar energy. To change this perception, Carter proclaimed May 3, 1978, "Sun Day," a national celebration of solar power.⁷⁷ To celebrate Sun Day the president visited the southwest, to try to retain the region's support and draw attention away from Jerry Brown.⁷⁸ Yet this effort fell short because the President's energy plan seemed to fall behind the California governor's. As the national organizer of Sun Day told a reporter, Brown "projected a greater number of homes that can be

⁷¹ "Energy Projects Get Tryout Grants," *Sacramento Bee*, April 6, 1978.

⁷² "Energy Projects get Tryout Grants."

⁷³ *The Office of Appropriate Technology: An Analysis of the Cost-Effectiveness of its Programs*, 16, 22.

⁷⁴ John Fialka, "Small Is Growing," *The Missoulian*, April 30, 1978.

⁷⁵ "Chasing the Sun..." *Modesto Bee*, 3 May 1978.

⁷⁶ Meg Jacobs, *Panic at the Pump: The Energy Crisis and the Transformation of American Politics in the 1970s* (New York, NY: Farrar, Straus and Giroux, 2017), 225.

⁷⁷ Jimmy Carter, "Sun Day, 1978 - Proclamation 4558 - March 27, 1978," *Public Papers of the Presidents of the United States 1978-Book I* (1978): 574-574.

⁷⁸ Leo Rennert, "Chasing the Sun..." *Modesto Bee*, May 3, 1978.

heated with solar power in California by 1985 than Schlesinger forecasts for the entire nation.”⁷⁹

As OAT continued to invest in solar projects, its mission simultaneously offered alternative energy for California and helped Brown challenge President Carter’s environmental program.

After its first full year, OAT gained more attention from the legislature. In the office’s first few months, political observers were skeptical and questioned whether it was simply an eccentric Brown idea.⁸⁰ While the nonpartisan Legislative Analyst’s Office (LAO) acknowledged OAT’s initial work, they suggested more “flat economics and cost-engineering expertise.”⁸¹ Essentially, its staff needed to be more technical and contend with the needs of legislators who were less willing to accept the success of the bureaucratic experiment as self-evident. For instance, Republican leaders remained unsympathetic. Assembly Minority Leader Paul Priolo quipped that the state “is facing tremendous problems... and what do we get from Jerry Brown? Wood chips and windmills.”⁸² Despite his critiques, Priolo anticipated that legislators would give OAT the \$800,000 budget that it requested. Rather than engaging with the merits of the program, he dismissed it as a partisan program being considered because of “mystique on the part of the governor...[that] Democrats will give him what he asks for.”⁸³ Ultimately, the Legislature approved OAT’s budget request. However, the LAO reminded legislators that the 1978-1979 budget “[had] presented the first opportunity for meaningful review and analysis.”⁸⁴ Securing funding for an additional year, OAT needed to demonstrate continued opportunities for economic benefits.

⁷⁹ Rennert, “Chasing the Sun...”

⁸⁰ Clark, “Office of Appropriate Technology Seeks a New Image.”

⁸¹ Clark, “Office of Appropriate Technology Seeks a New Image.”

⁸² Fialka, “Brown’s ‘Small Is Beautiful’ Is Taking Root.”

⁸³ Fialka, “Small Is Growing.”

⁸⁴ William G. Hamm, “Analysis of the Budget Bill of the State of California for the Fiscal Year July 1, 1979, to June 30, 1980” (Sacramento, CA: Legislative Analyst’s Office, February 1979), https://lao.ca.gov/analysis/1979/01_transmittal_overview_1979.pdf, 37.

Director Bob Judd wanted to reframe the image and reputation of the Office of Appropriate Technology in the summer of 1978. Reflecting on OAT's mission, Judd stressed a move away from a "funky, bib-overall, organic-gardening, West Marin" image and emphasized the technical and scientific aspects of the office's work.⁸⁵ Unlike Sim Van der Ryn, Judd had practical political experience. Although he appreciated OAT's consciousness-raising activities, his appointment marked a transition from the office as an idea-generating hub to an adequately funded energy project center. Moreover, he chose to move with changing political attitudes rather than see OAT as detached from the political arena. Shortly after its shocking passage, Judd argued that OAT matched the spirit of Proposition 13. His comments revealed an emphasis on self-reliance and personal empowerment:

"We're working with individual, self-reliance and all those macho, economic, self-made-man kinds of things that are rational and make damn good sense. I don't see this as a fringe liberal group at all. It's a technical training group."⁸⁶

Judd's reframing of OAT's mission allowed its staff to become more active participants in state energy policy and prioritize technical training and practical skills.

The 1978 gubernatorial campaign revealed a significant difference between Brown's "small is beautiful" energy approach and Republicans' anti-bureaucratic orientation. Like Minority Leader Priolo, Republican candidate Evelle Younger derisively labeled OAT a "windmills and woodchips outlet."⁸⁷ He was not interested in the substance of the Office, which he and other critics saw as the institutionalization of the counterculture. While he intended to end hundreds of boards and commissions, he specifically identified the Energy Commission and

⁸⁵ Clark, "Office of Appropriate Technology Seeks a New Image."

⁸⁶ Clark, "Office of Appropriate Technology Seeks a New Image."

⁸⁷ "Younger Vows Smaller Government," *Fresno Bee*, September 15, 1978.

OAT as examples of bureaucratic waste.⁸⁸ During a debate in October 1978, Younger identified a “proposed solar cow-washer” as an example of Brown’s unnecessary spending.⁸⁹ He referred to a project that OAT piloted to reduce state dairies’ energy usage. Director Judd confirmed that the project existed, but claimed that it was dropped because the proposed site was not representative of other state dairies. Rather than examining the merit of the project, Younger used it for rhetorical effect and to encourage skepticism of Brown’s alternative energy program. Similarly, in the same debate, Younger claimed that a sun heater installed in Brown’s state-owned apartment building cost \$100,000 when the Governor’s office claimed that it only cost \$9,400.⁹⁰ Ignoring the actual cost, Younger and the GOP portrayed OAT as a pet project of the governor that deserved to be eliminated. The Republican critique of the Brown administration, and OAT specifically, tried to focus voter attention on a message of reduced government rather than potential cost-savings.

Apart from the anti-bureaucratic nature of Younger and the Republican Party’s critiques, their plans differed from Brown’s because of their scales of time. Younger argued that Brown’s policies actually harmed the state. When he visited Riverside County, Younger warned his audience that Brown’s policies could cause an “energy and economic Pearl Harbor.”⁹¹ Specifically, he claimed that without nuclear energy that Californians might “go without power every other day.”⁹² Of course, Younger’s argument was sensationalized for the campaign trail, but he did emphasize that nuclear power was a solution for the near term. Rather than adopting

⁸⁸ “Younger Unveils His Budget-Cut Plan,” *Fresno Bee*, September 23, 1978.

⁸⁹ Gale Cook, “An Answer to Younger’s Charge about Brown Staff,” *San Francisco Examiner*, October 20, 1978.

⁹⁰ Cook, “An Answer to Younger’s Charge about Brown Staff.”; A related project at Hollandale Dairy cost \$5,050 in 1981, Center for Renewable Resources and Office of Appropriate Technology, “Catalogue of California: Model Solar Projects” (Sacramento, CA: Office of Appropriate Technology, 1981), 1.

⁹¹ “Younger Blast at Brown on ‘Small Is Beautiful,’” *Napa Valley Register*, September 6, 1978.

⁹² “Younger Blast at Brown on ‘Small is Beautiful.’”

the long-term outlook of the Office of Appropriate Technology, Younger cared about solutions that might yield the most immediate economic benefit. As his campaign surrogate Senator S.I. Hayakawa argued, only Younger “[would liberate the forces of creativity and industrial enterprise that will create jobs.”⁹³ The Republican candidate did not value government as a leader in the development of a more sustainable future. Instead, he felt that industry and business leaders should not be hampered with what he perceived as excessive regulation and hostility to economic growth. Ultimately, Younger lost the election, receiving only 36.5% of the vote.⁹⁴ Despite his rejection of Brown’s approach to energy policy, the Office of Appropriate Technology would survive and become a more prominent part of Brown’s second term.

OAT’s Political Maturation

After his reelection, Brown proposed new cuts in energy funding. Before 1978, the idea of limits remained a rhetorical point that the Governor argued would eventually come. Ironically, in 1978, Brown presided over a \$4 billion budget surplus, which he refused to use for property tax relief across the state.⁹⁵ So, in the June primary, when voters chose whether to support a property tax reduction offered by Proposition 13 or wait for legislative change, they voted overwhelmingly for the initiative. Thus, rather than an economic downturn or resource limits, it was an electoral change, Proposition 13, which dramatically changed the fiscal order of the state and local governments.⁹⁶ For OAT, this meant a budget cut of nearly 27%, leaving less money

⁹³ “Younger Hoping for a Surprise Tuesday,” *Santa Cruz Sentinel*, November 5, 1978.

⁹⁴ Part of Brown’s success was that voters saw him as “different” and believed he helped in the passage of Prop 13 because of an endorsement by co-chair Howard Jarvis, Pawel, *The Browns of California*, 273.

⁹⁵ Robert Kuttner, *Revolt of the Haves: Tax Rebellions and Hard Times* (New York, NY: Simon and Schuster, 1980), 54.

⁹⁶ On Proposition 13 see Kuttner, *Revolt of the Haves*; Peter Schrag, *Paradise Lost: California’s Experience, America’s Future* (Berkeley, CA: University of California Press, 1999), 129-187; Mathews and Paul, *California Crackup*, 35-57;

available for the office's operations.⁹⁷ Additionally, a budget analyst noted that the elimination of three person-years was "in keeping with the Governor's policy of reducing Government."⁹⁸ Conveniently, OAT completed the "demonstration phase" of the bike share program and a water conservation garden, reducing the need for direct funding for those projects.⁹⁹ For instance, the bike program moved to the Department of General Services, which allowed it to grow significantly from its original fifty bikes. Indeed, it saved the state \$30,000 annually in taxi fares and fuel costs.¹⁰⁰ As intended, OAT functioned as a promoter of information and best practices, rather than a new bureaucratic agency designed to hoard energy conservation programs. Rather than eliminate OAT, Governor Brown chose to preserve the essential functions of the office and keep it for the upcoming fiscal year.

In exchange for funding, the Legislature required OAT to submit a cost-effectiveness report in 1980, which revealed the office's savings and future interests. The report identified the three types of projects that the office contributed to, including lowering capital costs, avoiding energy costs, and reducing levels of agency support.¹⁰¹ These three assessment areas aimed to reduce spending in projects and operations costs, as well as "[promote] greater efficiency in government programs."¹⁰² Over two years, the combined cost savings of the office exceeded \$15.2 million compared to the \$2.2 million required to run the office over two fiscal years.¹⁰³ Despite beginning with a modest budget and staff, legislators saw the potential of the office and

⁹⁷ Cheryl Clark, "140 Job Cuts in Brown's Proposed Energy Budget," *Fresno Bee*, January 10, 1979.

⁹⁸ Edmund G. Brown Jr., *1979-80 Governor's Budget* (Sacramento, CA: Governor's Office, 1979), <http://archive.org/details/governorsbudget1979cali>, 31.

⁹⁹ Brown Jr., *1979-80 Governor's Budget*, 31.

¹⁰⁰ *The Office of Appropriate Technology: An Analysis of the Cost-Effectiveness of its Programs*, 16, 22.

¹⁰¹ *The Office of Appropriate Technology: An Analysis of the Cost-Effectiveness of Its Programs* (Sacramento, CA: Office of Appropriate Technology, March 1980), 2-3.

¹⁰² *The Office of Appropriate Technology: An Analysis of the Cost-Effectiveness of its Programs*, 2.

¹⁰³ *The Office of Appropriate Technology: An Analysis of the Cost-Effectiveness of its Programs*, 3.

their investment produced considerable savings. Because OAT believed that it demonstrated its value, it asked the legislature to consider investing \$15 million into a new capital outlay project that could save the state \$56 million.¹⁰⁴ Although the office began small, with nearly \$300,000 and a handful of staff, their willingness to ask for millions of dollars for a single project revealed OAT's growth and the Legislature's willingness to appropriate funding to it. They were no longer a small, obscure office, but one that could offer practical applications of ideas that saved the state millions of dollars and offered hints of future success.

The cost-effectiveness report also revealed OAT staff's internal considerations, including goals and performance assessment. Primarily, the report argued that progress towards educating on and implementing their work "[would] be measured in decades, not fiscal years."¹⁰⁵ OAT staff understood their efforts for a sustainable future to be a long process that could not neatly fit the duration of a budget year. While their emphasis on conservation was genuine, they tried to demonstrate that their work was also valuable. For the upcoming fiscal year, OAT staff estimated that anticipated projects could provide nearly \$3.9 in economic benefits for Californians and \$871,000 in state government operational costs.¹⁰⁶ Rather than investing all their money into one or two major projects or numerous small demonstrations, the office tried to invest in multiple projects to increase the opportunities for success. They wanted to replicate successful projects, like the gassifier, across the executive branch and, ideally, create new skills. At the local level, OAT staff believed that supporting projects could stimulate demand for new technologies and reduce energy consumption.¹⁰⁷ By the 1979-1980 Fiscal Year, OAT analysts estimated that conservation projects sponsored in six cities, including Imperial Beach, Riverside, and Pacifica,

¹⁰⁴ *The Office of Appropriate Technology: An Analysis of the Cost-Effectiveness of its Programs*, 3.

¹⁰⁵ *The Office of Appropriate Technology: An Analysis of the Cost-Effectiveness of its Programs*, 13.

¹⁰⁶ *The Office of Appropriate Technology: An Analysis of the Cost-Effectiveness of its Programs*, 14.

¹⁰⁷ *The Office of Appropriate Technology: An Analysis of the Cost-Effectiveness of its Programs*, 65.

would save roughly \$46,350 in energy costs over the next five years.¹⁰⁸ The office proposed that with continued funding they could continue to reduce state government's operational costs and support local communities' efforts at sustainability.

Although he did not mention OAT specifically, Brown's failed bid for the 1980 Democratic Presidential nomination signaled his attempt to take its animating principles to the national stage. Brown criticized incumbent President Carter, whose approach to the energy crisis depended on nuclear energy, and derided his approach on environmental grounds.¹⁰⁹ Historical literature on the 1980 Democratic primary rightly emphasizes the contest between Carter and Massachusetts Senator Ted Kennedy, which represented a debate over liberalism and centrism in the Party.¹¹⁰ However, Brown's message differentiated him from both candidates. In particular, his campaign slogan proudly proclaimed: "Protect the Earth, serve the people, explore the universe."¹¹¹ Although the slogan was vague, it revealed Brown's key priorities: conservation and the development of new technologies. Certainly, his development of OAT and the successes in California were not detached from his campaign themes. Projects like passive solar systems, solar job training, and the harnessing of wind energy offered larger, national applications. OAT's influence, if unspoken, was more readily apparent in his call for "the reindustrialization of the country."¹¹² The reindustrialization would take place in many of the same projects that OAT was already working on in California, including solar energy, mass transit, and other alternative energy sources. He even proposed doubling the national space budget.¹¹³ Although Senator

¹⁰⁸ *The Office of Appropriate Technology: An Analysis of the Cost-Effectiveness of its Programs*, 41-42.

¹⁰⁹ Pawel, *The Browns of California*, 256.

¹¹⁰ Timothy Stanley, *Kennedy vs. Carter: The 1980 Battle for the Democratic Party's Soul* (Lawrence, KS: University Press of Kansas, 2010); Jon Ward, *Camelot's End: Kennedy vs. Carter and the Fight That Broke the Democratic Party*, First edition (New York, NY: Twelve, 2019).

¹¹¹ Newton, *Man of Tomorrow*, 198.

¹¹² Tom DeVries, "How Now Brown?," *Bennington Banner*, January 8, 1980.

¹¹³ David Hoffman and Dan Meyers, "Jerry Brown," *Charlotte Observer*, March 9, 1980.

Kennedy joked that Brown “may [have been] 100 years ahead of his time,” the ideas that he promoted were not new and they were not entirely baseless.¹¹⁴ Brown’s 1980 campaign demonstrated an opportunity to take the successes of OAT nationwide, and while it did not happen, he could not have claimed authority on environmentalism without the office.

The state legislature provided additional funding for the Office of Appropriate technology and increased its legitimacy with the passage of Senate Bill 1725 in 1980. Senator Robert Presley introduced the bill to codify the existence of OAT, rather than leave it as an executive order, which left it at the discretion of the governor.¹¹⁵ The bill was notably bipartisan and did not split across party lines. SB1725 passed in the Senate on a vote of 22 to 10, with seven Republicans joining the Democrats.¹¹⁶ After the Assembly Committee on Ways and Means reviewed and recommended the bill for passage, the Assembly voted in favor of the bill 68 to 3.¹¹⁷ Passed with minor amendments, the Senate approved the Assembly’s version and sent SB1725 to Governor Brown’s desk.¹¹⁸ The bill required OAT to advise the governor and the legislature “on the implementation of innovative technologies related to ... community economic and job development, ... energy and resource conservation, and other related subjects.”¹¹⁹ Additionally, a new requirement of the bill mandated an annual summary of the office’s work of its cost-effectiveness.¹²⁰ The passage of SB1725 secured OAT’s position in the executive branch and made it a legitimate forum for alternative energy innovation and resource conservation.

¹¹⁴ Hoffman and Meyers, “Jerry Brown.”

¹¹⁵ “The Assembly - Bills Passed,” *Berkeley Gazette*, July 10, 1980.

¹¹⁶ *Journal of the Senate, 1979-1980*, Volume 6 (Sacramento, CA), 10571

¹¹⁷ *Journal of the Assembly, 1979-1980*, Volume 10 (Sacramento, CA), 17959.

¹¹⁸ *Journal of the Senate, 1979-1980*, Volume 8 (Sacramento, CA), 13737.

¹¹⁹ Chapter 653, *Statutes and Amendments to the Codes 1980* (Sacramento, CA), <https://clerk.assembly.ca.gov/sites/clerk.assembly.ca.gov/files/archive/Statutes/1980/80Vol2.PDF#page=3>, 1830.

¹²⁰ Chapter 653, *Statutes and Amendments to the Codes 1980*, 1831.

Director Judd actively pushed OAT to mature and guided it into a self-sufficient future. As the office grew, Judd insisted on using state and federal dollars for expansion into new projects, rather than keeping a narrow focus. Under his leadership, the office would not simply provide services for people, but act as a partner in empowering people to implement appropriate technology principles. One program, the Energy Extension Service, focused its funding on residential energy to save the energy equivalent of \$3.5 million.¹²¹ Instead of maintaining oil dependence, this program provided local communities with alternative energy sources that benefitted their community. Rather than imposing a rigid model, OAT staff integrated their approach to the needs of the target communities. In a brochure, OAT staff argued that their model demonstrated “what is best in government: foresight, efficiency, and commitment.”¹²² This assessment revealed what made the office different. They proposed projects, advised local governments and organizations, helped them implement alternative energy sources, and turned over control to them. Their work was designed to nudge, rather than to use regulation to promote sustainable energy choices.

A new office building for OAT and other state agencies revealed the promises and limitations of Brown’s appropriate technology. On May 1, 1981, Governor Brown dedicated the Gregory Bateson Building, a landmark of energy efficiency that depended on the use of solar power. He named the building after Bateson, an influential social scientist whose legacy of “[recognizing] the necessity of human beings living in accord with sound environmental principles” paralleled the intent of the new office building.¹²³ A project years in the making, the building had large windows to maximize natural light, a computer to control shades that would

¹²¹ *The Office of Appropriate Technology: An Analysis of the Cost-Effectiveness of its Programs*, 18.

¹²² Postcard Brochure, "Office of Appropriate Technology," n.d., D-601, Box 5, Folder 7, Fujimoto (Isao) Papers, University of California, Davis Archives and Special Collections, Davis, CA.

¹²³ Exec. Order. No. D-79-81 (May 1, 1981).

shield employees from the sun, tons of concrete to absorb heat, and a rock bed which trapped heat to function as an alternative air conditioner and heater.¹²⁴ However, the building did attract controversy and criticism, even from people who worked in the building. Some mentioned that the building's passive heating and cooling system was imperfect, causing some parts of the building to be too cold or too hot depending on the season.¹²⁵ Director Judd defended the project, arguing that the bugs needed to be worked out.¹²⁶ But, for all the intrigue the building provoked, it was unsuccessful in its initial implementation. As with most of OAT's work, appropriate technology was an investment and sometimes their work succeeded and other times, as in the Bateson building, it fell short of the big ideas it promised.

Near the end of Brown's term, OAT justified its work to the legislature and identified new directions for their work. SB 1725 mandated that OAT provide a report of its work for the first time in December 1982. A major achievement of the office was the creation of MICROPAS, which was a microcomputer simulation program for building designers to determine energy efficiency.¹²⁷ The program allowed users to simulate designs and to test whether their designs were sufficiently energy-efficient and compliant with state efficiency standards. OAT developed programs like these to meet legislative priorities, such as building standards, and to provide the public with the means to be creative within a state framework. During the year, OAT combined two separate units into the Community Assistance and Information Program to coordinate the work of information and publications staff with those who worked directly on projects in local communities.¹²⁸ For instance, one publication called *Working Together: Community Self-*

¹²⁴ Coe, "California: Beyond the Bottom of the Barrel," 10-11; Fialka, "Small is Growing."

¹²⁵ Claudia Buck, "Jury Is Out on Building Experiment," *Sacramento Bee*, March 7, 1982.

¹²⁶ Buck, "Jury is Out on Building Experiment."

¹²⁷ *OAT's Sixth Year - Office of Appropriate Technology*, 3.

¹²⁸ *OAT's Sixth Year - Office of Appropriate Technology*, 19.

Reliance in California, featured groups solving statewide issues at the local level. These projects ranged from the Santa Clara Municipal Solar Utility, the Arcata Food Cooperative, and the Humboldt Bay Wastewater Authority.¹²⁹ Although published a year before this report, *Working Together* featured projects that could be replicated across the state and demonstrated that OAT could continue to create networks, connecting interested Californians with successful organizations, local leaders, and private enterprise. While the Accomplishments report detailed projects and their impact, a more detailed economic report on cost-effectiveness would not be released until September 1983, under the next governor. Throughout the report, OAT staff emphasized their efforts at efficiency and usefulness to the state and its citizens.

George Deukmejian won the 1982 gubernatorial election, campaigning against what he called the anti-business climate of the Brown years. He conducted a cautious campaign, focusing on two themes. Mainly, Deukmejian said he would reduce state spending and restore law and order. As the state Attorney General, Deukmejian was reluctant to pursue lawsuits on environmental issues and even closed that section in his office.¹³⁰ On the campaign trail, he argued that Brown's use of regulation led to an economic climate that discouraged the development of the private sector.¹³¹ It did not help that his opponent, Democrat Tom Bradley, also implied that Brown's actions had negatively affected the state's business climate.¹³² Bradley regularly distanced himself from the Brown administration and insisted that he did not accept Brown's "small is beautiful" approach.¹³³ Essentially, both candidates ran against the Brown

¹²⁹ *Working Together: Community Self-Reliance in California* (Sacramento, CA: Office of Appropriate Technology, 1981), 33, 65, 77.

¹³⁰ "'Duke' to Be a Big Change for Environmentalists," *Redlands Daily Facts*, December 15, 1982.

¹³¹ "'Duke' to Be a Big Change for Environmentalists."

¹³² William Endicott, "Bradley Barbs Pose Obstacle for Brown," *Los Angeles Times*, September 15, 1982.

¹³³ "Bradley Runs Quiet Race While Deukmejian Saves his Money," *San Francisco Examiner*, 10 September 1982.

administration's record¹³⁴ and planned to take a different approach than the one developed by OAT. Like Evelle Younger, Deukmejian wanted to reduce the bureaucracy to create "jobs, jobs, and more jobs."¹³⁵ Deukmejian's victory left Brown's energy conservation and alternative energy approach imperiled.

The End of "Small is Beautiful"

After his election, Deukmejian fulfilled his campaign promise to cut costs and closed the Office of Appropriate Technology. At the office Christmas party in 1982, Bob Judd learned that the Governor-elect planned to fire all the staff of the office.¹³⁶ Defending OAT, Judd insisted that the office saved more money than it took in every year.¹³⁷ Indeed, the combined projects depended on roughly one million dollars annually from the general fund, plus external federal funds, to generate millions of dollars in savings. Savings ranged from \$1-4 million, except for the 1979-1980 fiscal year, which staff estimated would produce nearly \$13 million in economic benefits.¹³⁸ Maintaining his campaign commitment, Deukmejian intended to cut the staff of the Office of Planning and Research by half. Because OAT was a part of OPR, it was always under consideration for elimination. Although Brown created OAT, Judd expressed his frustration that the incoming administration had ignored what he believed to be the promise of the office.

Emphasizing that their work was nonpartisan, the director was dismayed because he hoped that

¹³⁴ On a scale of one to ten, 46.3% of Californians polled thought Governor Brown's performance merited less than a five with less than a month to the 1982 election; "OPIN-JERRY BROWN," California Poll, October 24, 1982-October 3, 1982, accessed May 01, 2021, <https://tinyurl.com/Brown1982Poll>.

¹³⁵ Jennifer Kerr, "Deukmejian Will Need His 'Miracle' as Governor," *Press Democrat*, November 9, 1982.

¹³⁶ Steven A. Capps, "Deukmejian Fires Staff of Brown's 'Idea Factory,'" *San Francisco Examiner*, December 26, 1982.

¹³⁷ Capps, "Deukmejian fires staff of Brown's 'Idea Factory.'"

¹³⁸ *The Office of Appropriate Technology: An Analysis of the Cost-Effectiveness of its Programs*, 14.

the work would continue even under the new governor. Instead, the idea of “small is beautiful” gave way to a rigid cost-cutting approach and the reduction of governmental leadership in the technology sector.

Despite the unceremonious end of the Office of Appropriate Technology, its existence and survival for nearly six years demonstrated its success in encouraging sustainable development. In 2019, Jerry Brown reflected that “many of the things in 1975 [became] more plausible and credible thirty years later.”¹³⁹ This reflection is an apt description of what happened. In its time, OAT promoted new ideas and offered new ways for conserving natural resources and spreading ideas across the state. More broadly, it attempted to use government as a vehicle for change and imagined a long-term future of environmental consciousness, energy cost-savings, and technological innovation. However, the concept of appropriate technology failed to influence potential supporters outside of the Brown administration. Thus, Deukmejian’s choice to end the office eliminated any chance it had for future accomplishments. Moreover, nearly sixteen years of Republican control of the governorship also meant that this experimentation with government leadership in resource conservation ended. While Governor Brown’s approach did not align with mainstream liberals in his party, his approach provided an alternative response to governance in an increasingly conservative California.

¹³⁹ Edmund G. Brown, Jr, *Jerry Brown: A Life in California Politics*, conducted by Scott Shafer, Martin Meeker, and Todd Holmes in 2019, Oral History Center, The Bancroft Library, University of California, Berkeley, 2020, 292.